

Extragalactic Exploration with SIRTf*

M. W. Werner
Jet Propulsion Laboratory, California Institute of Technology
Pasadena, CA 91109
United States of America

ABSTRACT

The Space Infrared Telescope Facility (SIRTf) will explore the Universe at infrared wavelengths with a depth and precision complementary to that achieved by NASA's other Great Observatories. SIRTf will be the first mission to combine the high sensitivity achievable from a cryogenic space telescope with the imaging and spectroscopic power of the new generation of infrared detector arrays. Current plans call for a December, 2001 launch for SIRTf, and the cryogen supply will last for at least 3.5 years,

Two of SIRTf's principal defining science themes - the study of the Early Universe and of Ultraluminous Galaxies and Active Galactic Nuclei - are focused on the extragalactic sky. As a result, SIRTf will have very powerful capabilities for the study of these and related extragalactic problems. This paper will review these capabilities to show how SIRTf can produce major advances in these areas. We will also review modes of community participation in SIRTf, with emphasis on the Legacy Science Programs, which will both probe specific questions in depth and create large databases which stimulate follow-on observations and subsequent archival research.

This work was undertaken at the Jet Propulsion Laboratory, California Institute of Technology, under an agreement with the National Aeronautics and Space Administration.

*- Prepared for the XVIIth Moriond Astrophysics Meeting - *Extragalactic Astronomy in the Infrared* - March 1997